

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the present application.

Listing of Claims:

1. (**Currently Amended**) An isolated or purified antimicrobial agent obtained from a strain of *Lactobacillus salivarius* isolated from resected and washed human gastrointestinal tract which inhibits a broad range of Gram positive and Gram negative microorganisms and which secretes said antimicrobial agent ~~a product~~ having antimicrobial activity into a cell-free supernatant,

wherein said antimicrobial activity being produced only by growing cells;

said antimicrobial activity being destroyed by proteinase K and pronase E;

the inhibitory properties of said ~~strain and secretory products thereof~~ antimicrobial agent being maintained in the presence of physiological concentrations of human bile and human gastric juice, and

said antimicrobial agent has bacteriocin-like properties.

2. (**Previously Presented**) The isolated or purified antimicrobial agent according to Claim 1, which has the following properties:

- (i) an apparent molecular weight between 30 and 100 kDa;
- (ii) heat stability;
- (iii) stable over a wide pH range;
- (iv) resistant to treatment with detergents;
- (v) resistant to organic solvents;
- (vi) sensitive to proteolytic enzymes including proteinase K, pronase E, trypsin, α - chymotrypsin, ficin and papain; and

- (vii) resistant to lipase, catalase, alkaline phosphatase, phospholipase C and lipoprotein lipase.

3. **(Withdrawn)** A purified fraction of the isolated or purified antimicrobial agent according to Claim 2, which has the following properties:

- (i) a molecular weight of 5.0 - 5.3 kDa;
- (ii) a relative amino acid composition which has greater than 45% of hydrophobic amino acids, 19-21% glycine, 13-14% alanine and 11-12% leucine, no tryptophan or tyrosine, one methionine and four proline residues;
- (iii) an amino acid sequence SEQ ID NO: 1 at or adjacent to the N-terminus; and
- (iv) comprises an amino acid sequence SEQ ID NO: 2.

4. **(Withdrawn)** A purified fraction of the isolated or purified antimicrobial agent according to Claim 2, which has the following properties:

- (i) a molecular weight of 5.3 - 6.1 kDa; and
- (ii) a relative amino acid composition which has greater than 28-30% of hydrophobic amino acids, 17% glycine and 12-13% alanine, no tryptophan and two proline residues.

5. **(Previously Presented)** The isolated or purified antimicrobial agent according to claim 1 or 2 for use in foodstuffs.

6. **(Previously Presented)** The isolated or purified antimicrobial agent according to claim 1 or 2 for use as a medicament.

7. **(Previously Presented)** The isolated or purified antimicrobial agent according to claim 1 or 2 for use against methicillin resistant *S. aureus* (MRSA).

8. **(Canceled)**

9. (Currently Amended) An isolated or purified antimicrobial agent obtained from a strain of *Lactobacillus salivarius* isolated from resected and washed human gastrointestinal tract which inhibits a broad range of Gram positive and Gram negative microorganisms, is adherent to Caco-2 and HT-29 cells and ~~secretes a product~~ said antimicrobial agent having antimicrobial activity into a cell-free supernatant,

wherein said antimicrobial activity being produced only by growing cells;

said antimicrobial activity being destroyed by proteinase K and pronase E;

the inhibitory properties of said ~~strain and secretory products thereof~~ antimicrobial agent being maintained in the presence of physiological concentrations of human bile and human gastric juice, and

said antimicrobial agent has bacteriocin-like properties.

10. (Currently Amended) An isolated or purified bacteriocin or proteinaceous compound obtained from a strain of *Lactobacillus salivarius*,

wherein said *Lactobacillus salivarius* is isolated from resected and washed human gastrointestinal tract which inhibits a broad range of Gram positive and Gram negative microorganisms, is adherent to Caco-2 and HT-29 cells, and ~~secretes a product~~ said antimicrobial agent having antimicrobial activity into a cell-free supernatant;

wherein said antimicrobial activity being produced only by growing cells;

said antimicrobial activity being destroyed by proteinase K and pronase E; and

said bacteriocin or proteinaceous compound has the following properties:

- (i) an apparent molecular weight between 30 and 100 kDa;
- (ii) stable over a pH range of 1-10;
- (iii) sensitive to proteinase K, pronase E, trypsin, α - chymotrypsin, ficin and papain;
and
- (iv) resistant to lipase, catalase, alkaline phosphatase, phospholipase C and lipoprotein lipase.

11. (New) The DNA sequence SEQ ID NO: 6 coding for bacteriocin ABP118.